

**AMENDMENTS TO THE CLAIMS**

1. (Currently amended) A method of modeling wireless interference among wireless links between a plurality of wireless nodes in a wireless network, the method comprising:

accepting connectivity information for the network;

identifying wireless links between nodes of the network from the connectivity information;

representing each identified link as a vertex; and

creating an edge between a first vertex and a second vertex if the corresponding wireless links interfere with one another;

assigning to the edge a direction; and

assigning to the edge a weight equal to a fraction of a maximum permissible noise at a link corresponding to the second vertex contributed by activity on the link corresponding to the first vertex.

2. (Original) The method of claim 1 wherein the connectivity information is represented by a connectivity graph.

3. (Original) The method of claim 1 further comprising:

assigning to the edge a weight of zero (0) if the links are not in conflict with each other; and

assigning to the edge a weight of one (1) if the links are in conflict with each other.

4. (Cancelled)

5. (Original) The method of claim 1 wherein each node is equipped with exactly one radio.

6. (Original) The method of claim 1 wherein each node is equipped with a plurality of radios.

7. (Original) The method of claim 1 wherein all nodes communicate on exactly one wireless channel.

8. (Original) The method of claim 1 wherein each node may communicate on a plurality of wireless channels.

9. (Original) The method of claim 1 wherein each node is equipped with exactly one omni-directional antenna.

10. (Original) The method of claim 1 wherein each node is equipped with a plurality of directional antennae.

11. (Original) The method of claim 1 wherein each node is equipped with a plurality of omni-directional antennae.

12. (Original) The method of claim 1 wherein all wireless links have equal capacities.

13. (Original) The method of claim 1 wherein the wireless links may have different capacities.

14. (Original) The method of claim 1 wherein a receiving node must be free of interference for a transmission to be successful.

15. (Original) The method of claim 14 wherein a sending node must be free of interference for a transmission to be successful.

16. (Original) The method of claim 1 further comprising making routing decisions based on the created edges and vertices.

17. (Original) The method of claim 1 further comprising making network infrastructure decisions based on the created edges and vertices.

18. (Currently amended) A computer-readable medium containing computer-executable instructions for ~~performing a method of~~ modeling wireless interference among wireless links between a plurality of wireless nodes in a wireless network, the ~~method~~computer-executable instructions performing steps comprising:

accepting connectivity information for the network;  
identifying wireless links between nodes of the network from the connectivity information;  
representing each identified link as a vertex; ~~and~~  
creating an edge between a first vertex and a second vertex if the corresponding wireless links interfere with one another;  
assigning to the edge a direction; and  
assigning to the edge a weight equal to a fraction of a maximum permissible noise at a link  
corresponding to the second vertex contributed by activity on the link corresponding to the first  
vertex.

19. – 89. (Cancelled)